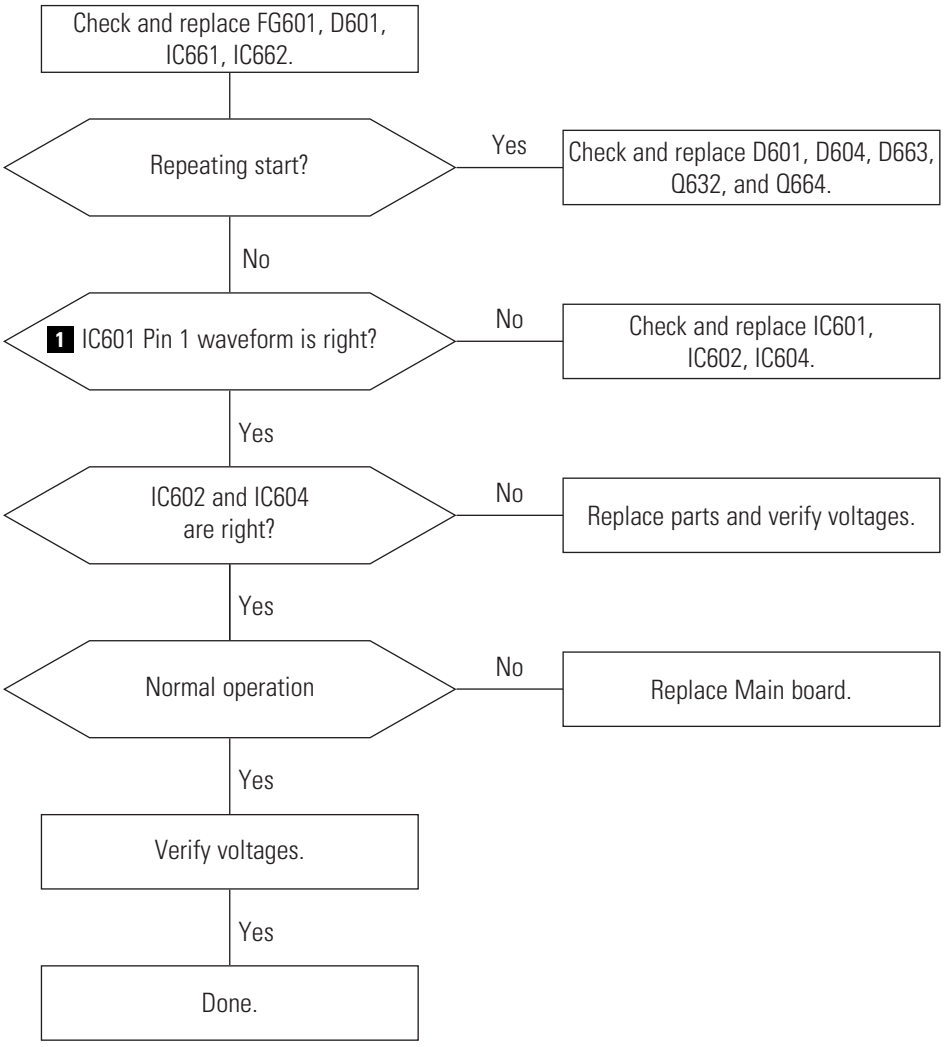
5 Troubleshooting

5-1 Parts Level Troubleshooting

Notes: 1. If a picture does not appear, fully rotate the brightness and contrast controls clockwise and reinspect.

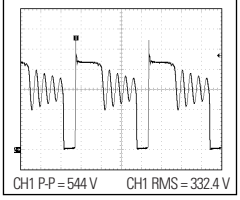
2. Check the following circuits.
   - No raster appears: Power circuit, Horizontal output circuit, H/V control circuit, and H/V output circuit.
   - High voltage develops but no raster appears: Video output circuits.
   - High voltage does not develop: Horizontal output circuits.

5-1-1 No Power Supply

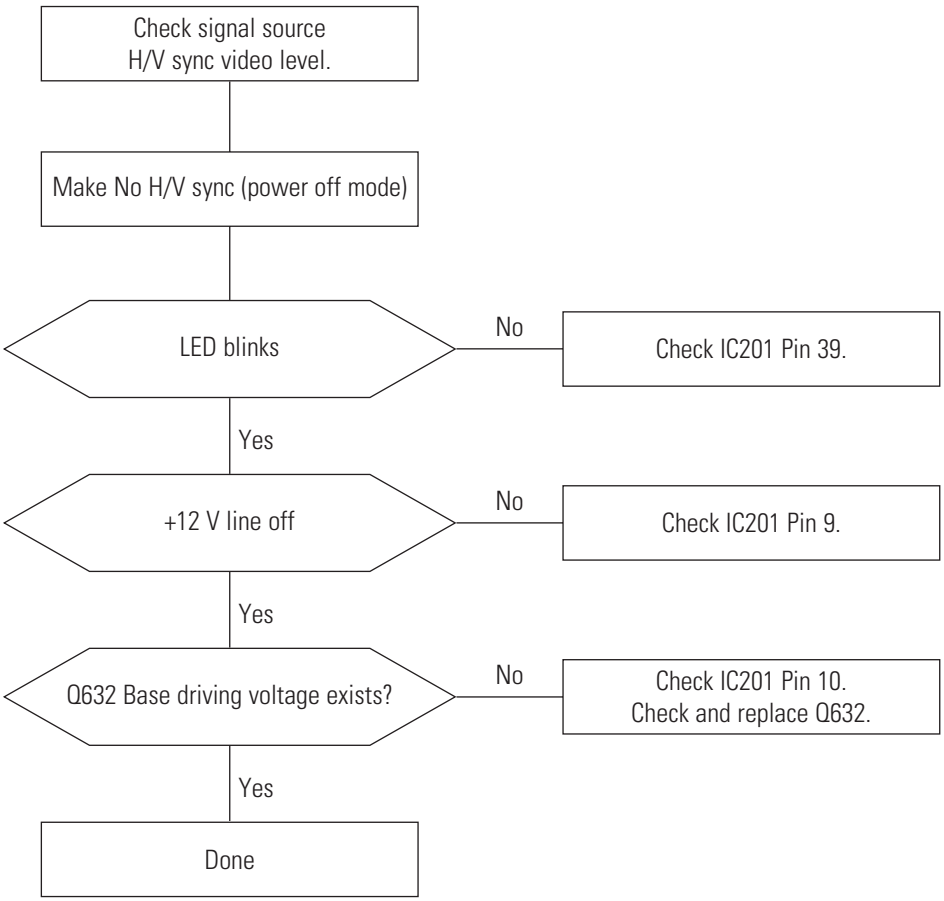


WAVEFORMS

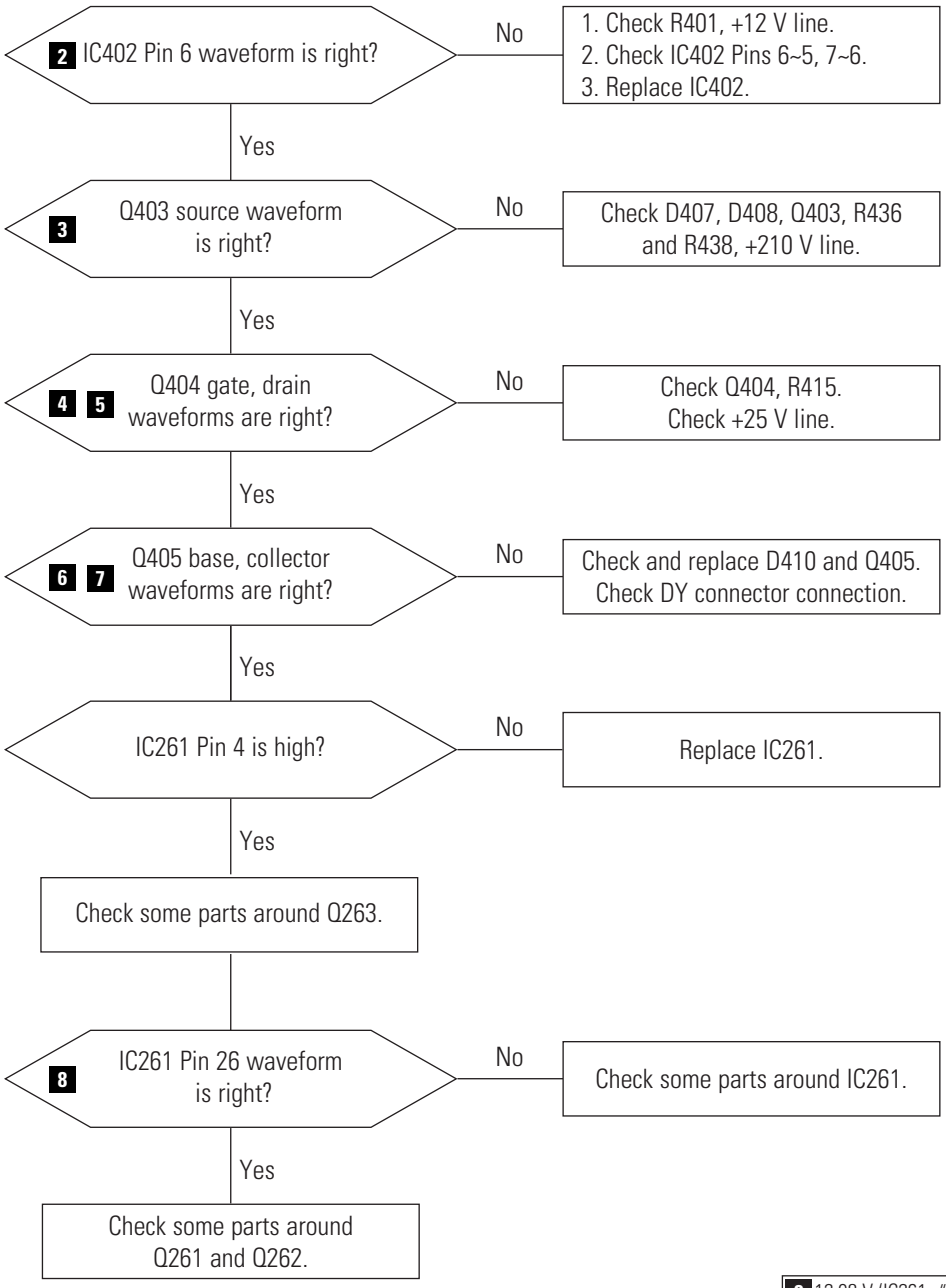
1 544 V (IC601, #1)



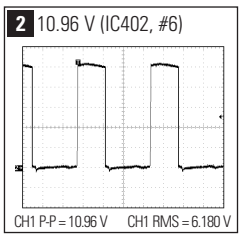
5-1-2 DPMS Failure

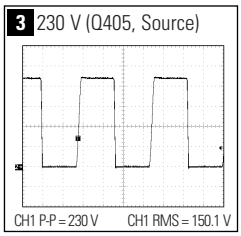


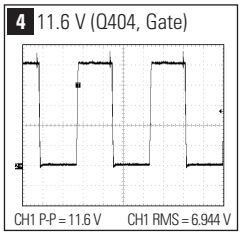
5-1-3 H_Deflection Failure

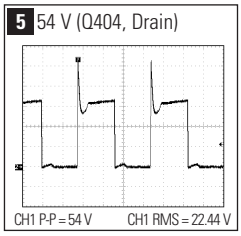

2 IC402 Pin 6 waveform is right?
No
1. Check R401, +12 V line.
2. Check IC402 Pins 6~5, 7~6.
3. Replace IC402.
Yes
3 Q403 source waveform is right?
No
Check D407, D408, Q403, R436 and R438, +210 V line.
Yes
4 5 Q404 gate, drain waveforms are right?
No
Check Q404, R415. Check +25 V line.
Yes
6 7 Q405 base, collector waveforms are right?
No
Check and replace D410 and Q405. Check DY connector connection.
Yes
IC261 Pin 4 is high?
No
Replace IC261.
Yes
Check some parts around Q263.
8 IC261 Pin 26 waveform is right?
No
Check some parts around IC261.
Yes
Check some parts around Q261 and Q262.

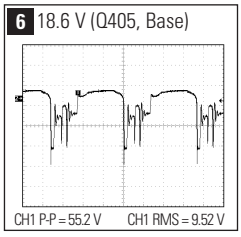
WAVEFORMS

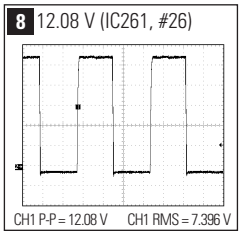


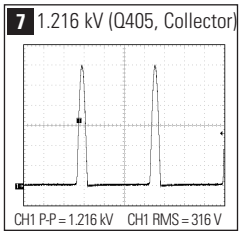




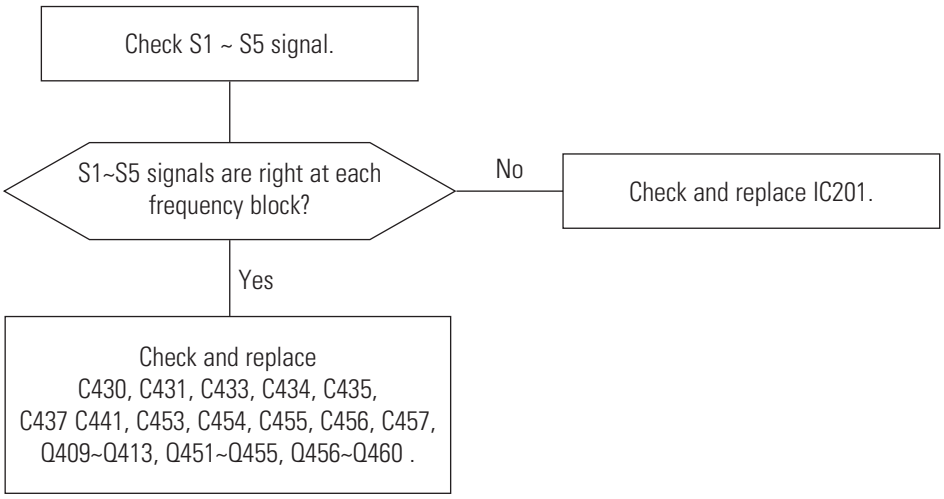




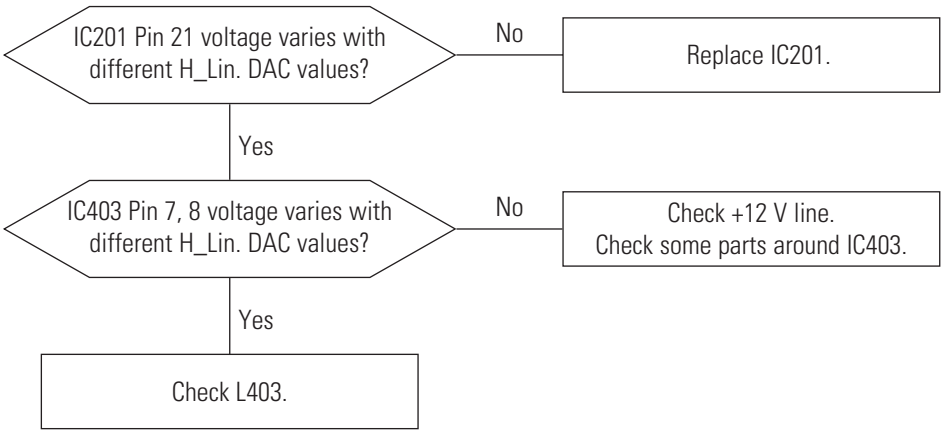




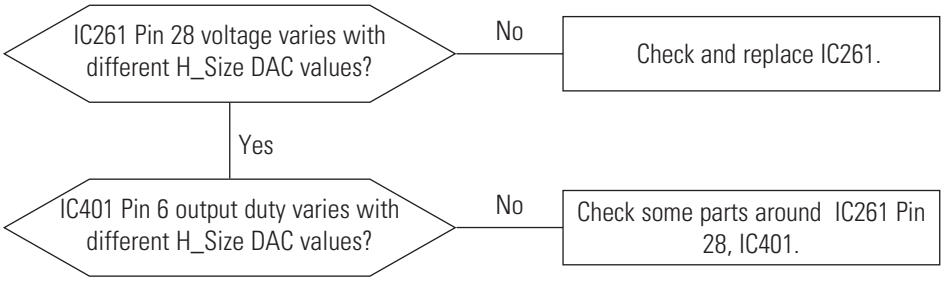
5-1-4 S Correction Failure


Check S1 ~ S5 signal.
S1~S5 signals are right at each frequency block?
No
Check and replace IC201.
Yes
Check and replace
C430, C431, C433, C434, C435,
C437 C441, C453, C454, C455, C456, C457,
Q409~Q413, Q451~Q455, Q456~Q460 .

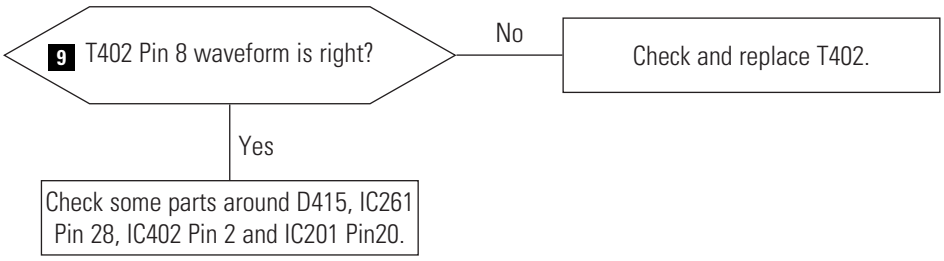
5-1-5 H_Lin. Failure



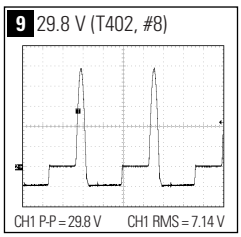
5-1-6 Invariable H_Size


IC261 Pin 28 voltage varies with different H_Size DAC values?
No
Check and replace IC261.
Yes
IC401 Pin 6 output duty varies with different H_Size DAC values?
No
Check some parts around IC261 Pin 28, IC401.

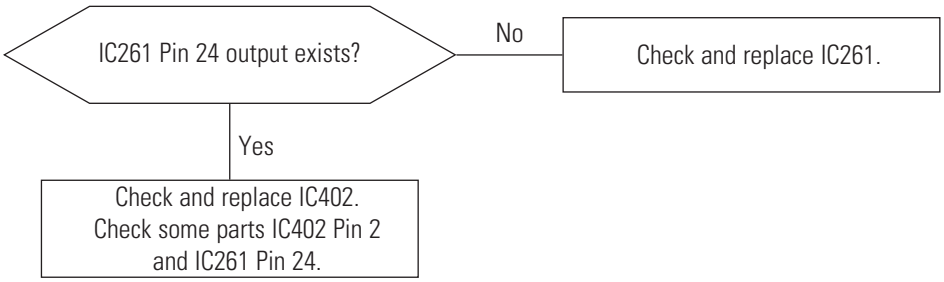
5-1-7 Abnormal H_Size


9 T402 Pin 8 waveform is right?
No
Check and replace T402.
Yes
Check some parts around D415, IC261 Pin 28, IC402 Pin 2 and IC201 Pin20.

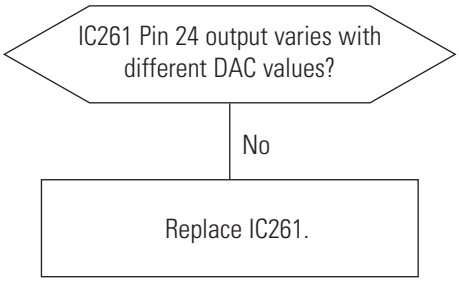
WAVEFORMS



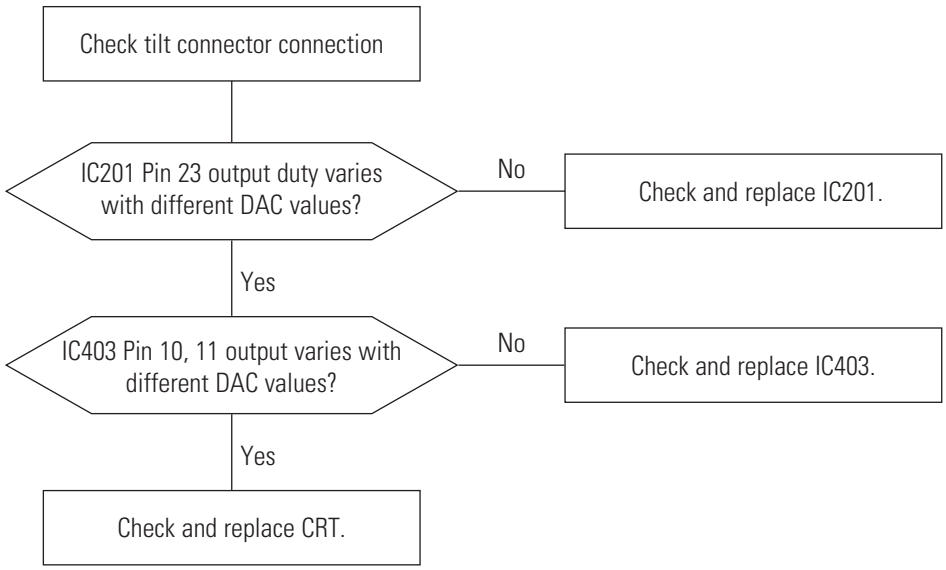
5-1-8 Side Pin or Trap Failure


IC261 Pin 24 output exists?
No
Check and replace IC261.
Yes
Check and replace IC402.
Check some parts IC402 Pin 2 and IC261 Pin 24.

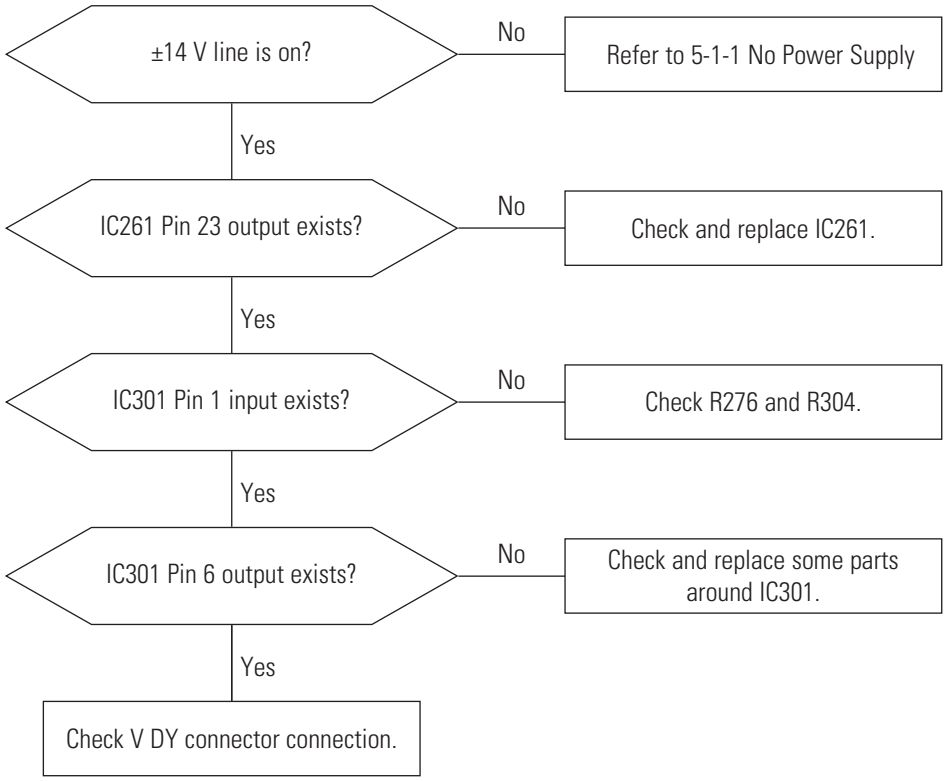
5-1-9 Para. or Pin Balance Failure



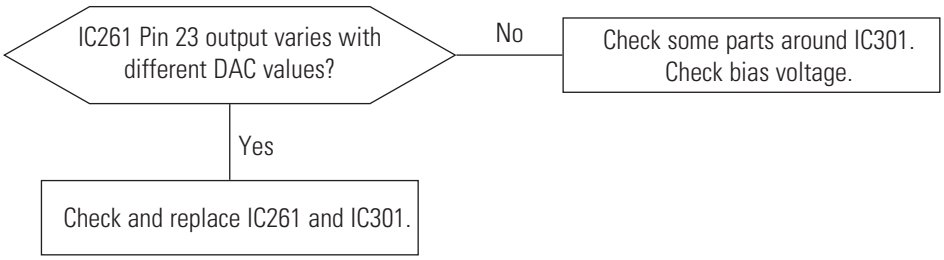
5-1-10 Tilt Failure


Check tilt connector connection
IC201 Pin 23 output duty varies with different DAC values?
No
Check and replace IC201.
Yes
IC403 Pin 10, 11 output varies with different DAC values?
No
Check and replace IC403.
Yes
Check and replace CRT.

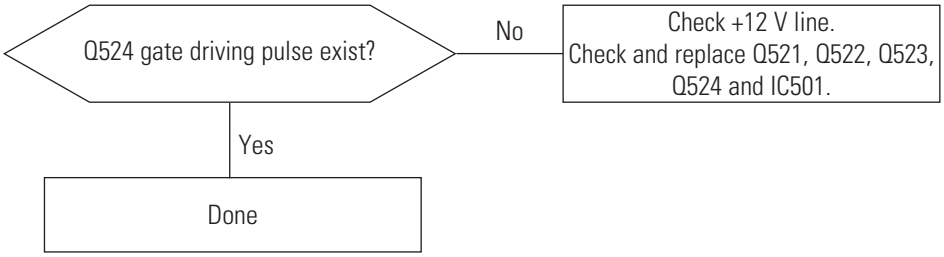
5-1-11 V Deflection Failure



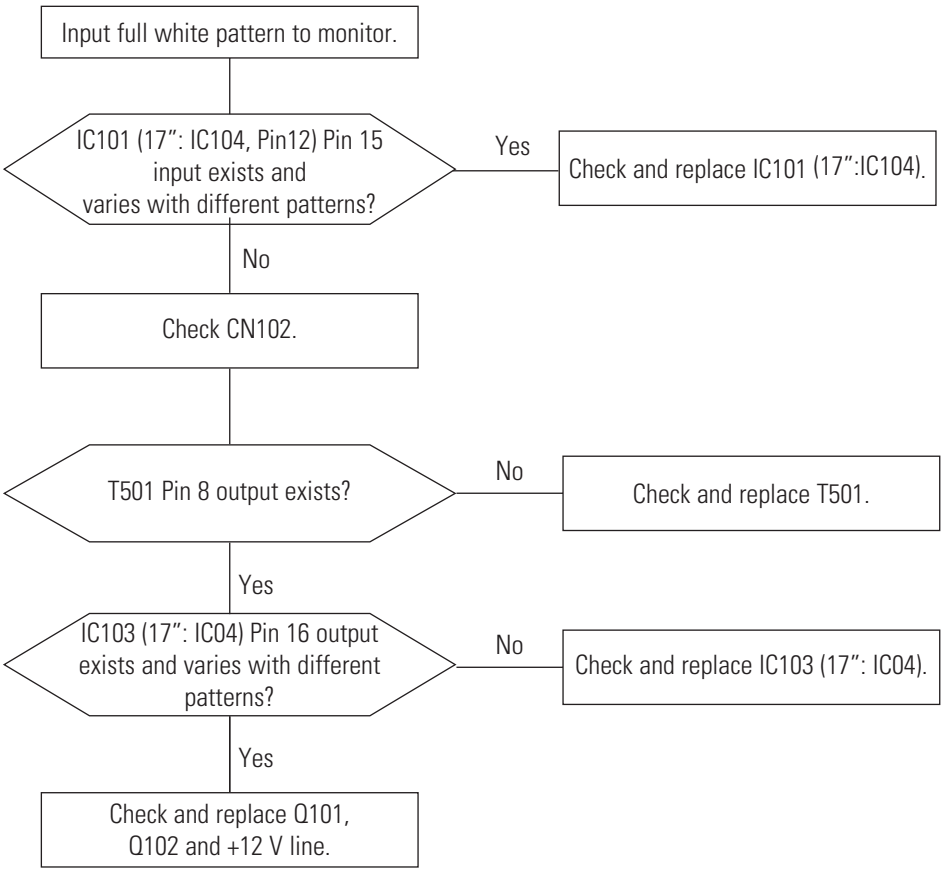
5-1-12 V Size or Pos. Variation Failure


IC261 Pin 23 output varies with different DAC values?
No
Check some parts around IC301. Check bias voltage.
Yes
Check and replace IC261 and IC301.

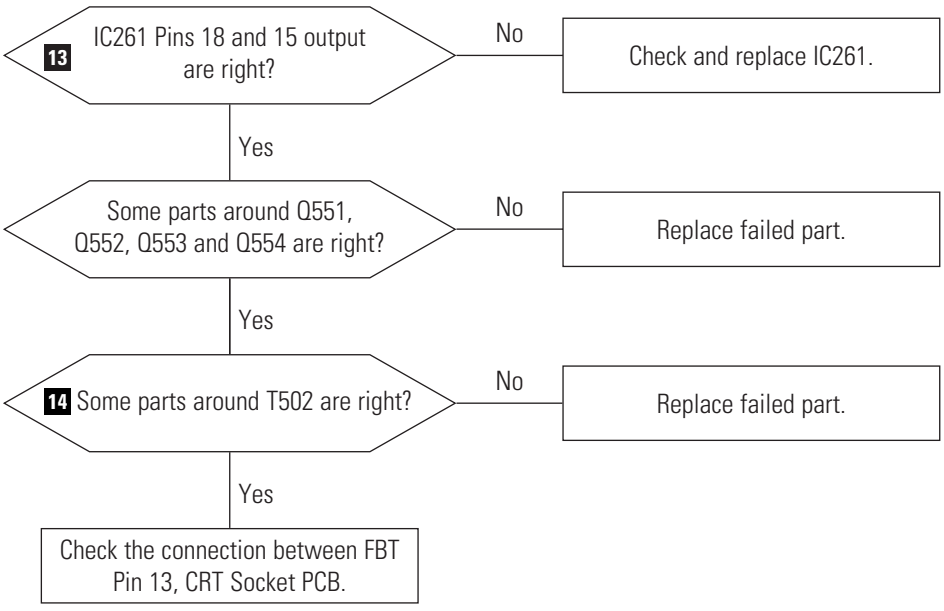
5-1-13 High Voltage Failure



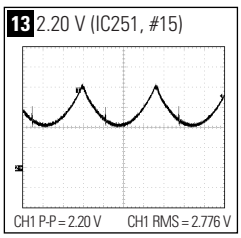
5-1-14 ABL Failure

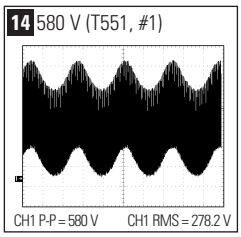

Input full white pattern to monitor.
IC101 (17": IC104, Pin12) Pin 15 input exists and varies with different patterns?
Yes
Check and replace IC101 (17":IC104).
No
Check CN102.
T501 Pin 8 output exists?
No
Check and replace T501.
Yes
IC103 (17": IC04) Pin 16 output exists and varies with different patterns?
No
Check and replace IC103 (17": IC04).
Yes
Check and replace Q101, Q102 and +12 V line.

5-1-15 Dynamic Focus Failure

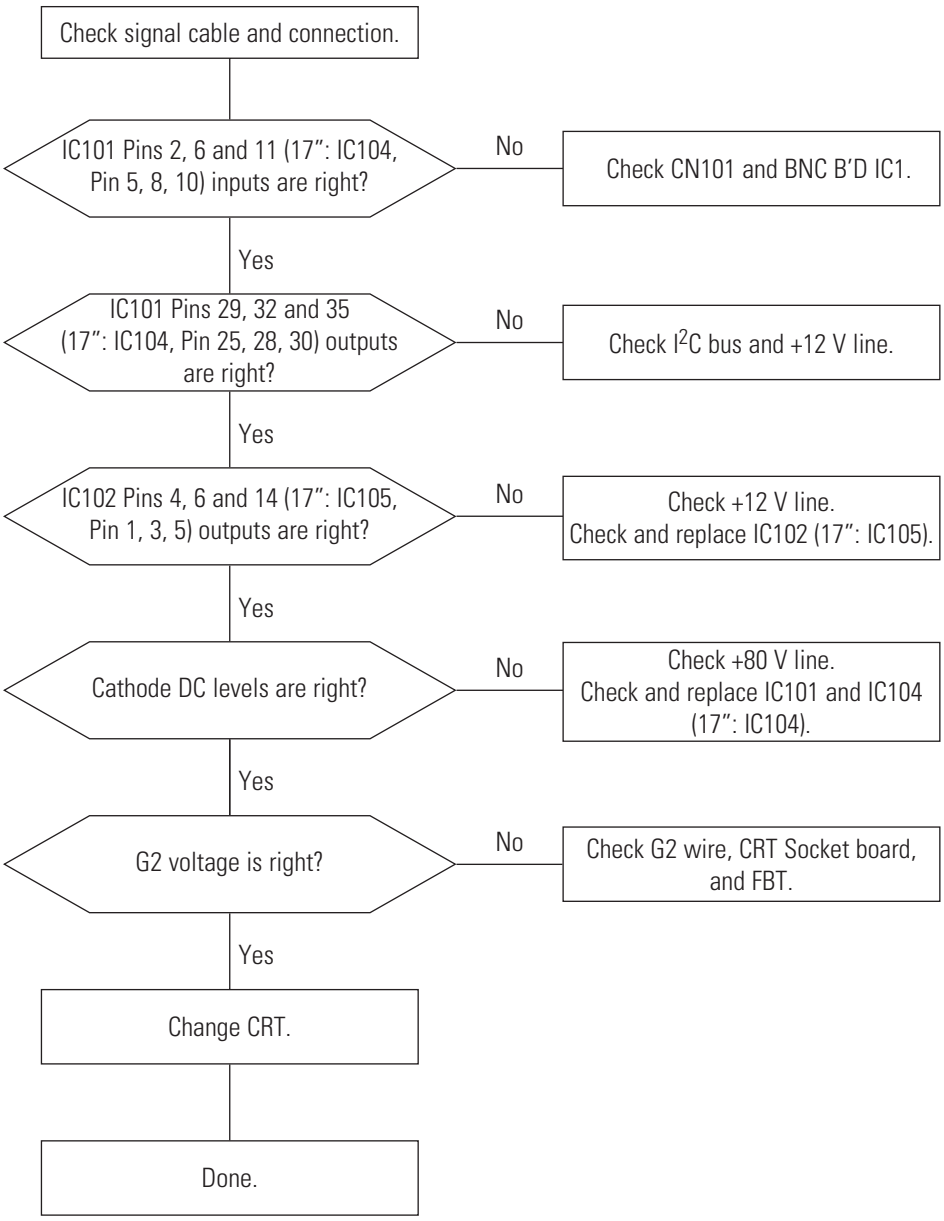

13 IC261 Pins 18 and 15 output are right?
No
Check and replace IC261.
Yes
Some parts around Q551, Q552, Q553 and Q554 are right?
No
Replace failed part.
Yes
14 Some parts around T502 are right?
No
Replace failed part.
Yes
Check the connection between FBT Pin 13, CRT Socket PCB.

WAVEFORMS

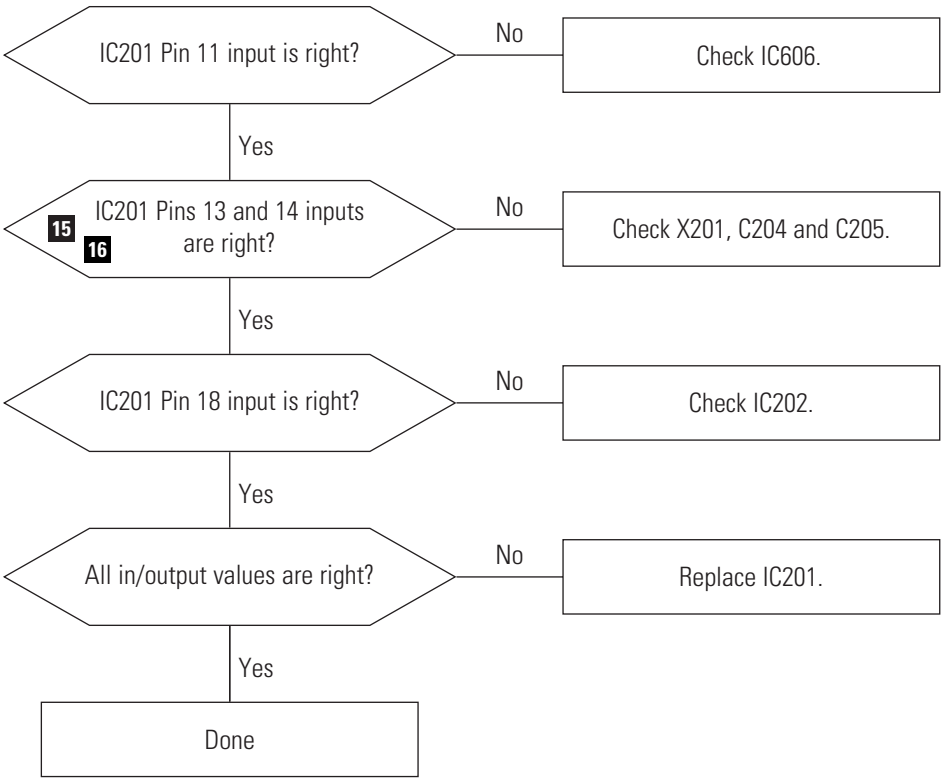




5-1-16 No Video

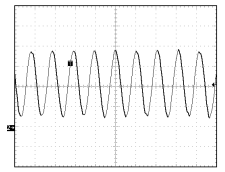

Check signal cable and connection.
IC101 Pins 2, 6 and 11 (17": IC104, Pin 5, 8, 10) inputs are right?
No
Check CN101 and BNC B'D IC1.
Yes
IC101 Pins 29, 32 and 35 (17": IC104, Pin 25, 28, 30) outputs are right?
No
Check I2C bus and +12 V line.
Yes
IC102 Pins 4, 6 and 14 (17": IC105, Pin 1, 3, 5) outputs are right?
No
Check +12 V line.
Check and replace IC102 (17": IC105).
Yes
Cathode DC levels are right?
No
Check +80 V line.
Check and replace IC101 and IC104 (17": IC104).
Yes
G2 voltage is right?
No
Check G2 wire, CRT Socket board, and FBT.
Yes
Change CRT.
Done.

5-1-17 Micom Failure

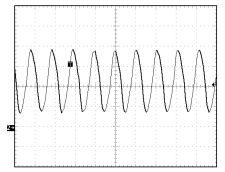


WAVEFORMS

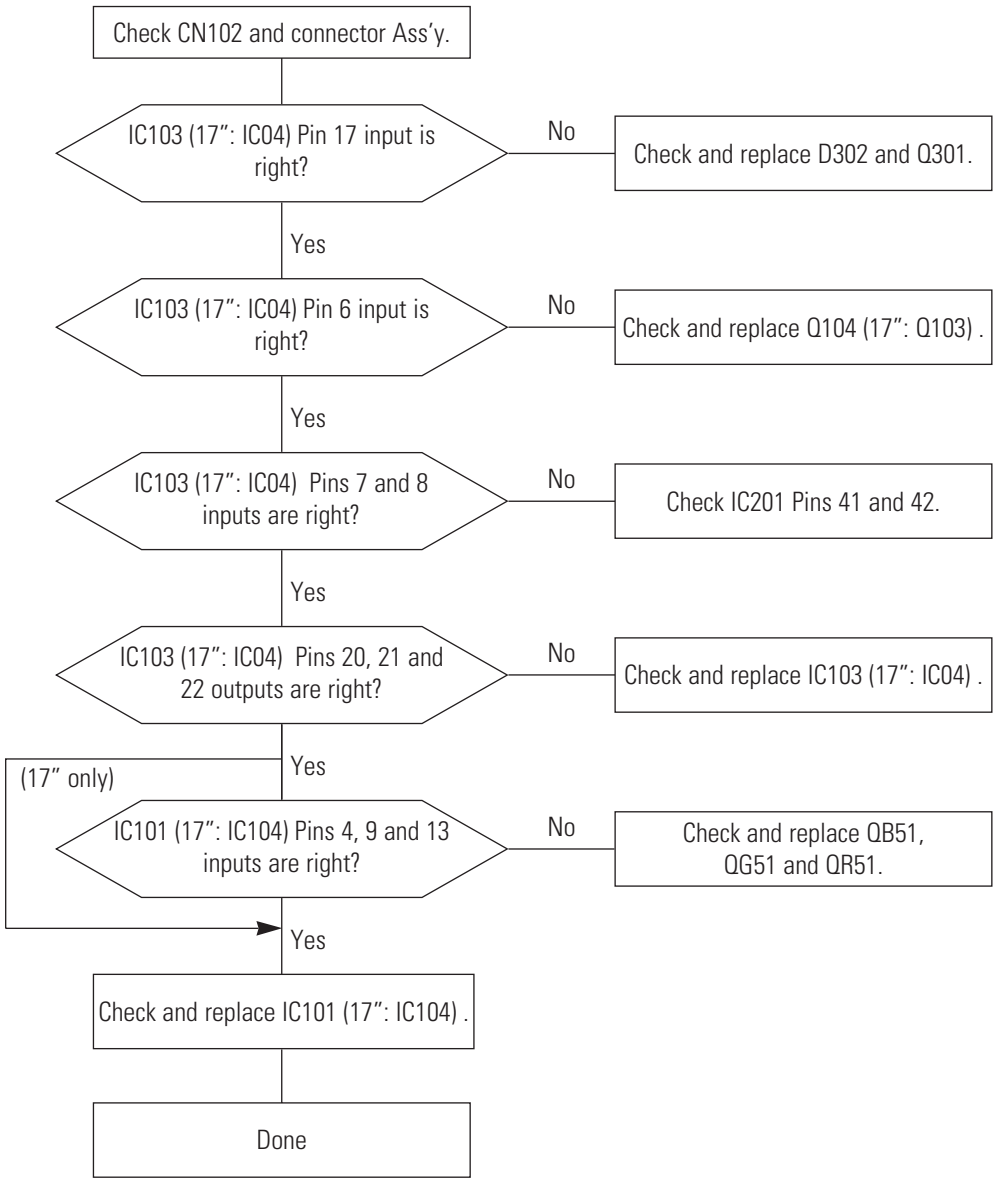
15 3.42 V (IC201, #33)



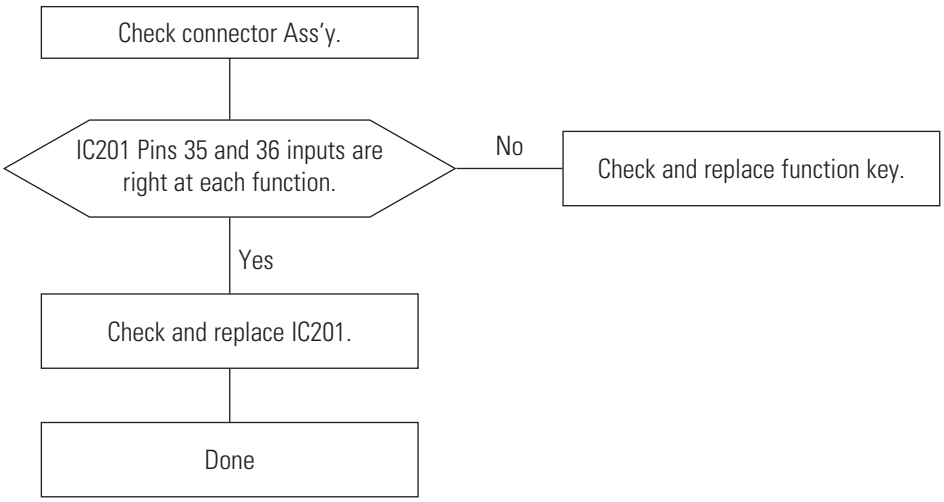
16 3.16 V (IC201, #32)



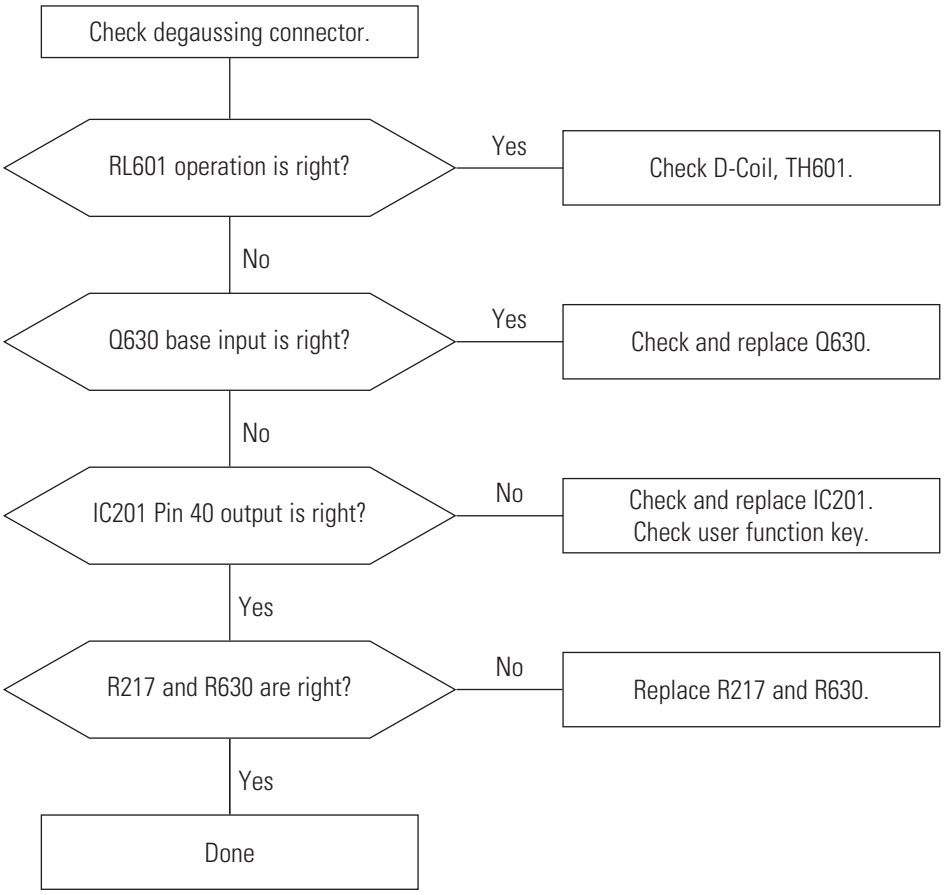
5-1-18 OSD Failure


Check CN102 and connector Ass'y.
IC103 (17": IC04) Pin 17 input is right?
No
Check and replace D302 and Q301.
Yes
IC103 (17": IC04) Pin 6 input is right?
No
Check and replace Q104 (17": Q103) .
Yes
IC103 (17": IC04) Pins 7 and 8 inputs are right?
No
Check IC201 Pins 41 and 42.
Yes
IC103 (17": IC04) Pins 20, 21 and 22 outputs are right?
No
Check and replace IC103 (17": IC04) .
Yes
(17" only)
IC101 (17": IC104) Pins 4, 9 and 13 inputs are right?
No
Check and replace QB51, QG51 and QR51.
Yes
Check and replace IC101 (17": IC104) .
Done

5-1-19 User Control Failure

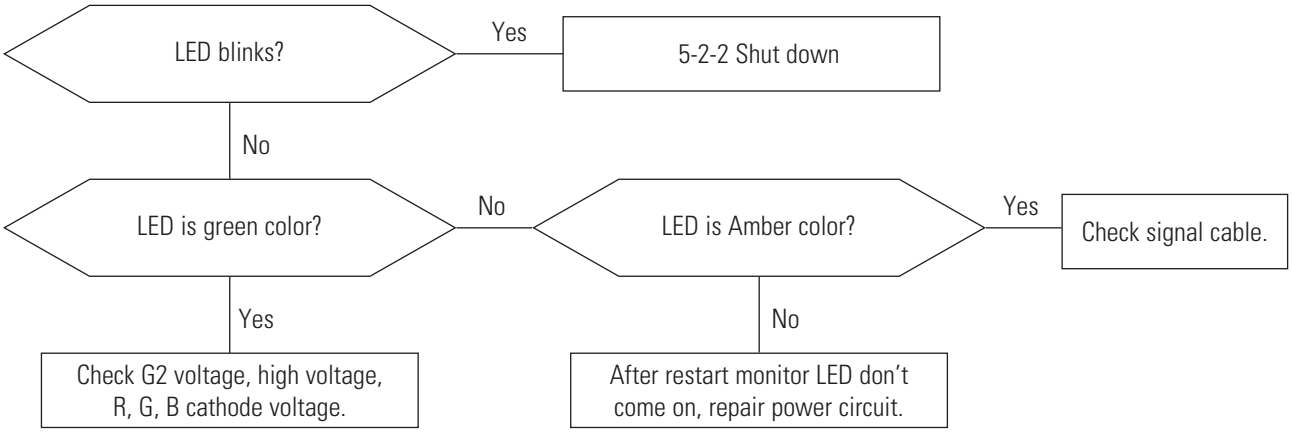


5-1-20 Degaussing Failure

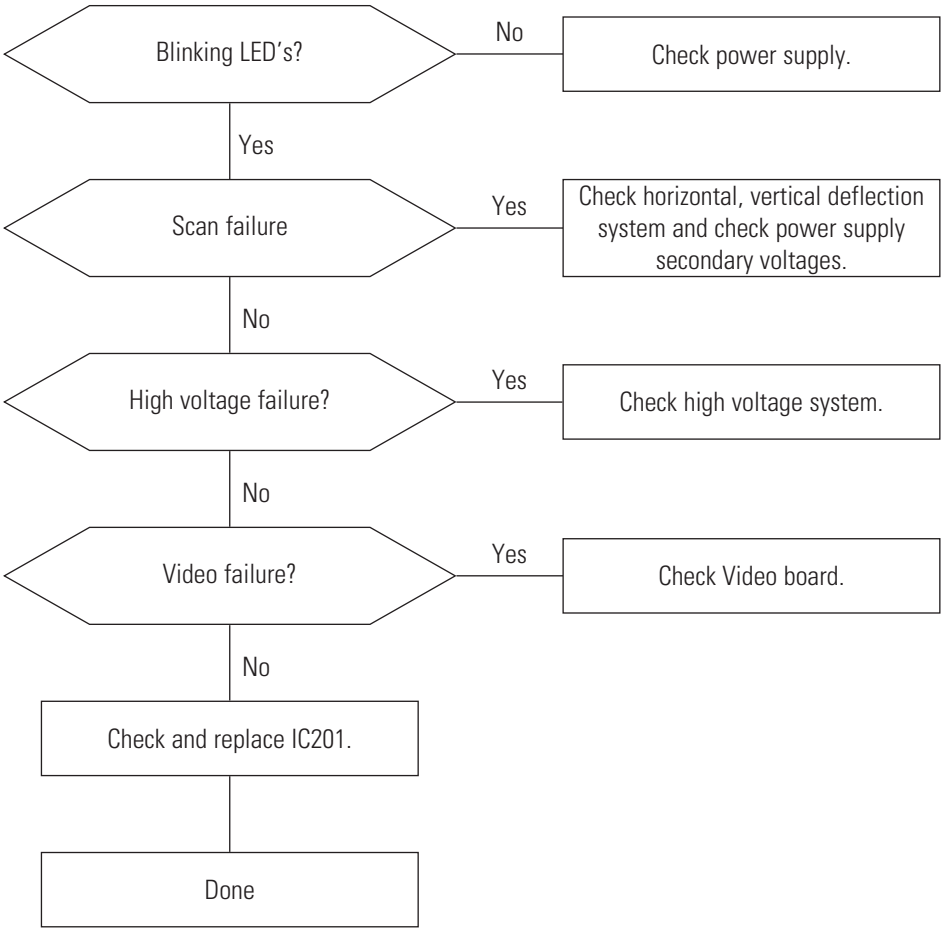


5-2 General Troubleshooting

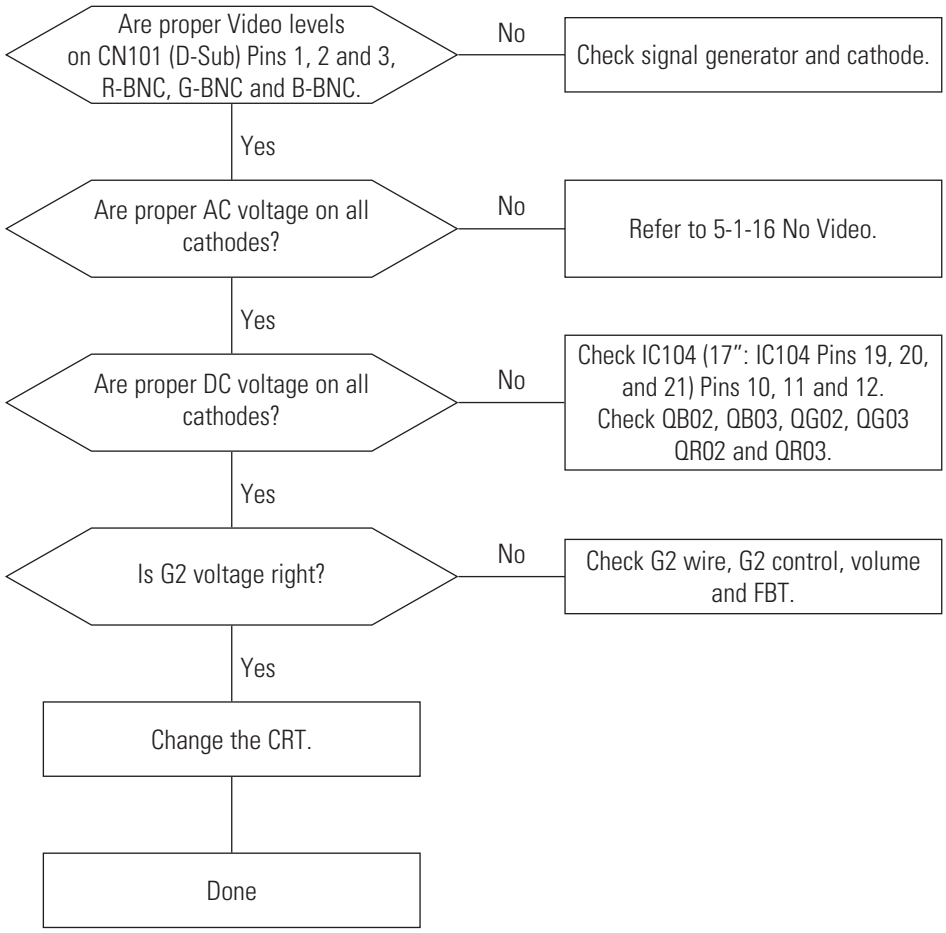
5-2-1 No Picture



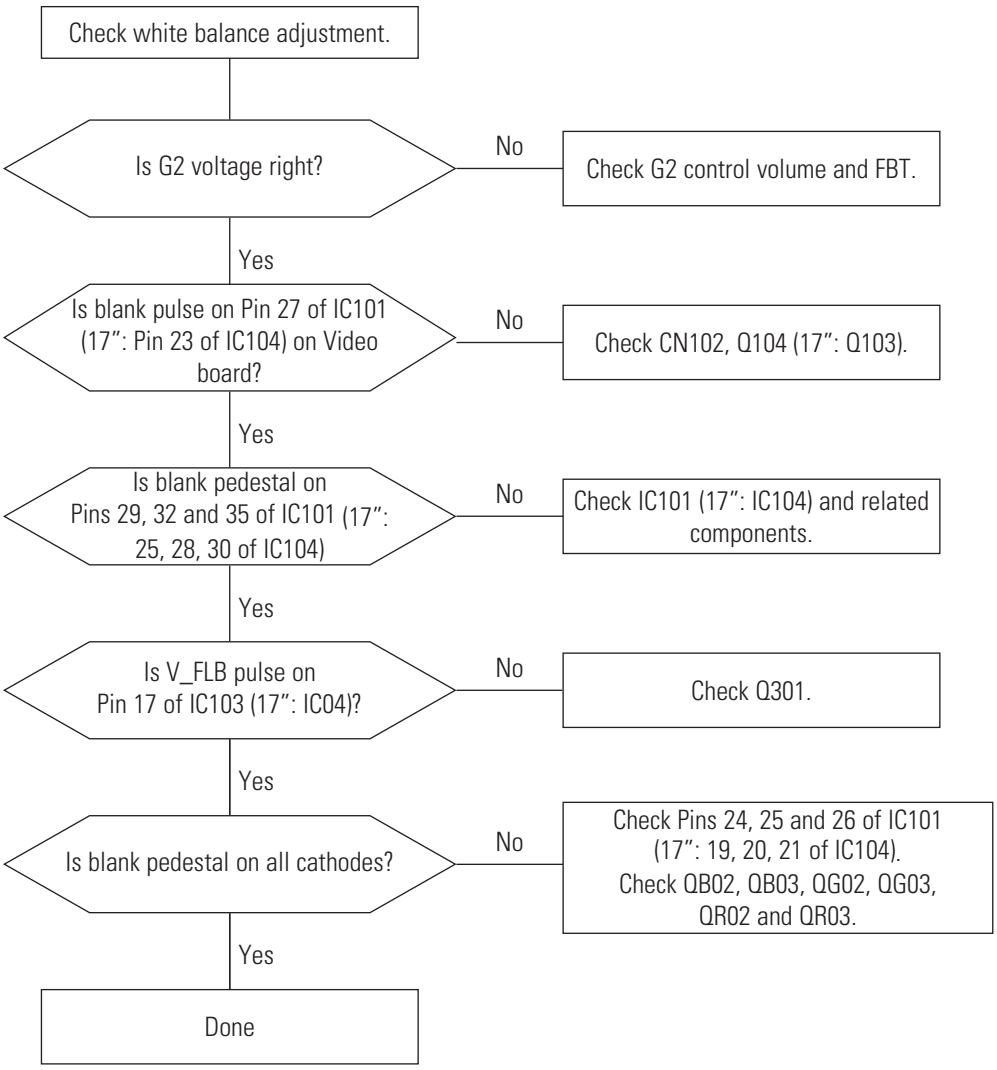
5-2-2 Shut Down



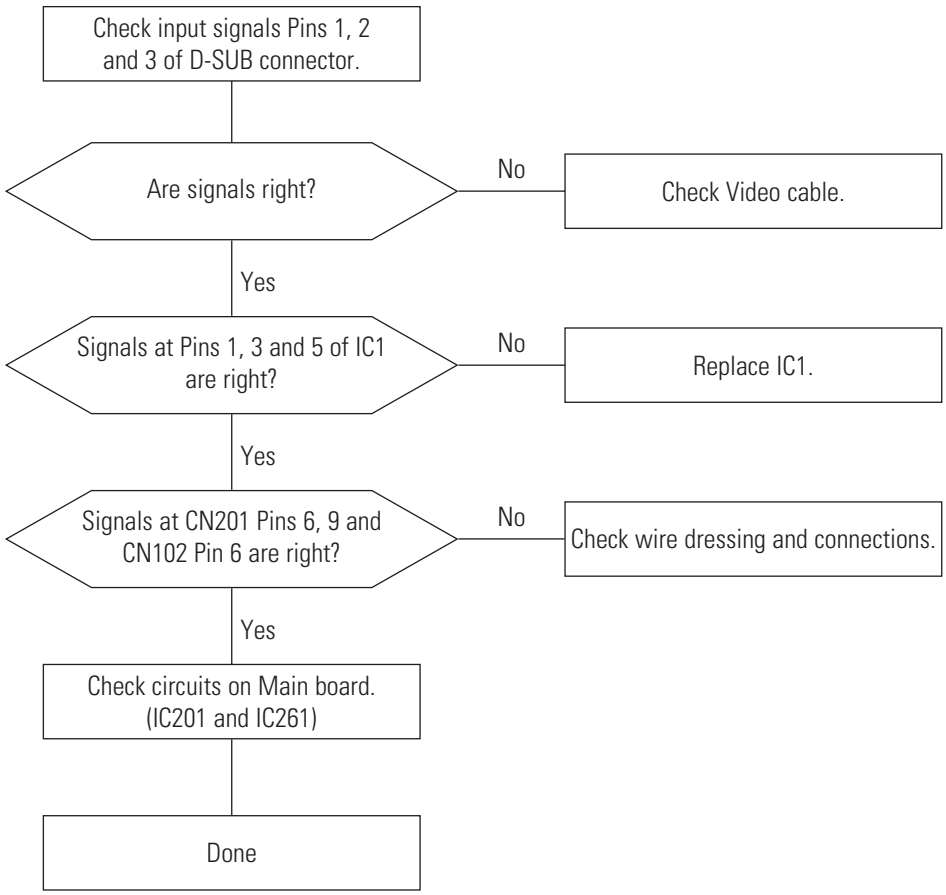
5-2-3 Missing Color


Are proper Video levels on CN101 (D-Sub) Pins 1, 2 and 3, R-BNC, G-BNC and B-BNC.
No
Check signal generator and cathode.
Yes
Are proper AC voltage on all cathodes?
No
Refer to 5-1-16 No Video.
Yes
Are proper DC voltage on all cathodes?
No
Check IC104 (17": IC104 Pins 19, 20, and 21) Pins 10, 11 and 12. Check QB02, QB03, QG02, QG03 QR02 and QR03.
Yes
Is G2 voltage right?
No
Check G2 wire, G2 control, volume and FBT.
Yes
Change the CRT.
Done

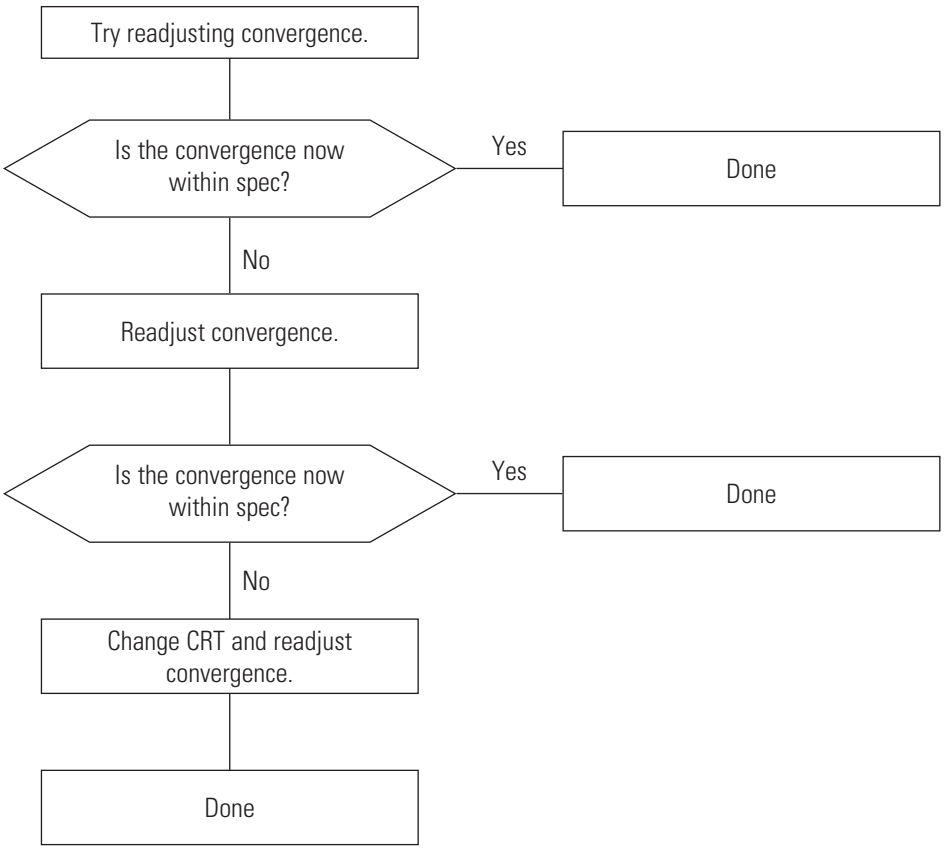
5-2-4 Visible Retrace


Check white balance adjustment.
Is G2 voltage right?
No
Check G2 control volume and FBT.
Yes
Is blank pulse on Pin 27 of IC101 (17": Pin 23 of IC104) on Video board?
No
Check CN102, Q104 (17": Q103).
Yes
Is blank pedestal on Pins 29, 32 and 35 of IC101 (17": 25, 28, 30 of IC104)
No
Check IC101 (17": IC104) and related components.
Yes
Is V_FLB pulse on Pin 17 of IC103 (17": IC04)?
No
Check Q301.
Yes
Is blank pedestal on all cathodes?
No
Check Pins 24, 25 and 26 of IC101 (17": 19, 20, 21 of IC104). Check QB02, QB03, QG02, QG03, QR02 and QR03.
Yes
Done

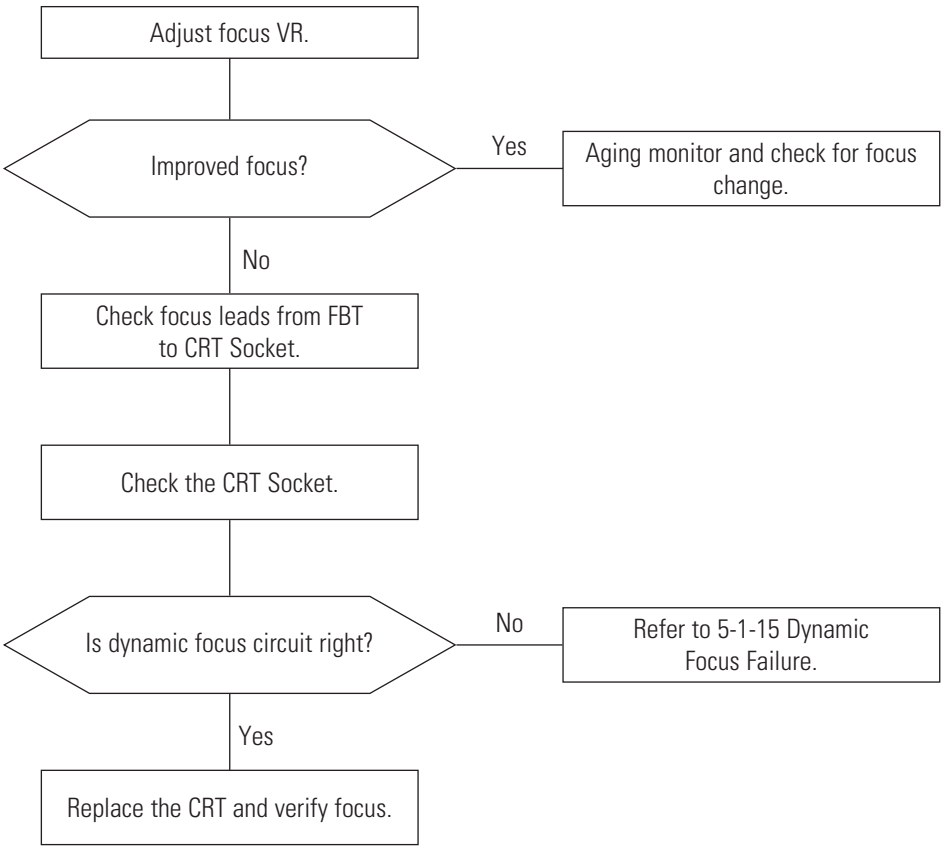
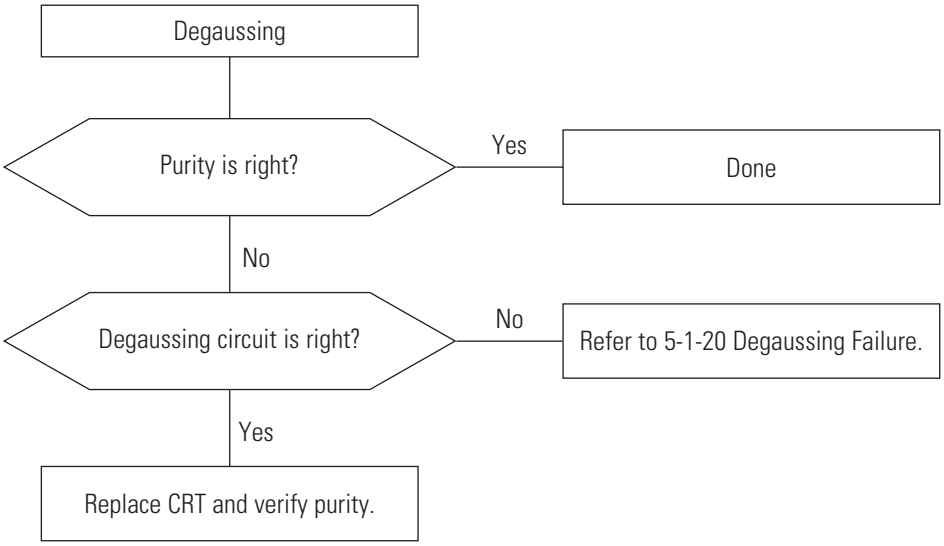
5-2-5 Unsynchronized Image


Check input signals Pins 1, 2 and 3 of D-SUB connector.
Are signals right?
No
Check Video cable.
Yes
Signals at Pins 1, 3 and 5 of IC1 are right?
No
Replace IC1.
Yes
Signals at CN201 Pins 6, 9 and CN102 Pin 6 are right?
No
Check wire dressing and connections.
Yes
Check circuits on Main board. (IC201 and IC261)
Done

5-2-6 Misconvergence



5-2-7 Poor Focus



5-2-8 Purity Failure